

**From:** Daley, Michelle [michelle.daley@unh.edu]

**Sent:** Monday, March 02, 2009 11:48 AM

**To:** Ives, Wayne

**Cc:** McDowell, Bill

**Subject:** Lamprey PISF rules

Dear Mr. Ives,

Thank you and DES for undertaking such an important study of the Lamprey River and sharing the process with the public.

After reviewing the report and talking with several stakeholders in the watershed about the report, I have a few comments.

My largest concerns lie with the MesoHABSIM model used to predict instream flows necessary to support fish and aquatic life since these seem to be the most flow sensitive entities in the Lamprey River based on the report. First, the use of this model seems fundamentally flawed by excluding the dams that are present along the Lamprey River. The Macallam, Wiswall and Folsom Dams will exist into the foreseeable future and will continue to impact the hydrologic regime of the Lamprey. When establishing protected instream flows, it seems necessary to model reality and incorporate the role of these dams into any modeling exercise. Second, the ecological variables included in the final MesoHABSIM model for presence/absence should have the same sign in the model for abundance if they are also included in that model. One of the variables was included in both models, but had different signs (positive in one and negative in the other). How can one variable positively influence the presence of fish in one model and then negatively impact the abundance in the other (or vice versa)? These final models should make ecological sense. Finally, the relative importance of the different variables included in the final MesoHABSIM models is not evident and this is an important consideration when interpreting the model results. Examining the relative importance of ecological variables included will help inform the reader/decision maker and this should be examined and included in the next version of the report.

My other concern is that when it comes time to establish these PISF rules and allocate water use, not all the users who have a hydrologic influence on the designated reach will be part of the allocated water use. Large water users upstream and large groundwater withdrawals that aren't within the water management planning area can certainly still have a hydrologic influence on the designated reach. I'm concerned that even if the most ideal protected instream flows are set, they may not be reached if these other water users are not incorporated into the management plan.

My final comment is regarding table 1. This table seems to be the heart of the report and is what the established protected instream flows will be. It should be clear to the casual reader of table 1 how these flows were reached (brief/one sentence model description) and how this table will influence our management plan. There are overlapping time periods with different flows...which flow will be managed for? Explaining the table and terms in more detail in the legend would be useful.

Thank you for the opportunity to be a part of this process!

Sincerely,  
Michelle Daley

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